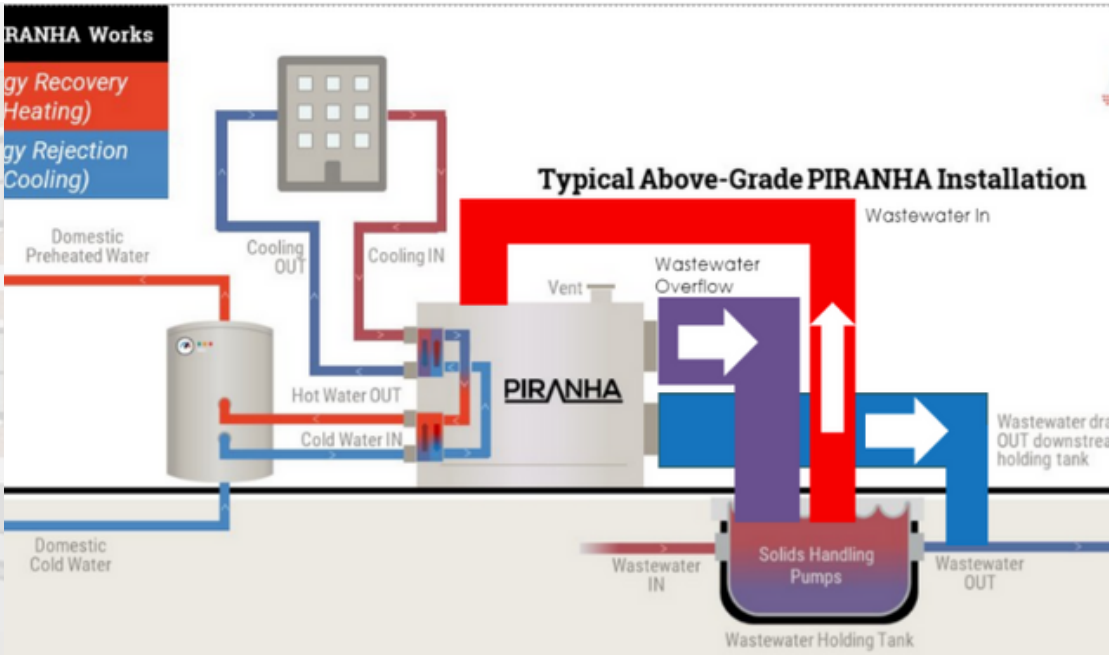
CITY OF GOLDEN:
HEART OF GOLDEN

https://www.guidinggolden.com/heart-of-golden

WASTEWATER HEAT RECOVERY



WHAT'S THE PURPOSE?

The new buildings to be designed for the Heart of Golden aim to be "net zero," meaning that the systems associated with and installed in them produce all the power that the building needs to operate. In order to achieve this goal, the buildings will require innovative design involving multiple technologies. One such technology are wastewater heat recovery units like the one modeled above.

Energy Savings

The amount of energy input required for heating and cooling building will be reduced compared to a regular HVAC system. The required energy inputs can be provided by solar.

Cost Savings

Due to reduced energy input required, return on investment is rapid and lends itself to monetary savings over time.

Sustainability

Environmental analyses show limited environmental impacts due to system creation and operation compared to regular HVAC systems.

WHY HEAT RECOVERY?

More than half of the energy demanded by a house is demanded for ambient heating and cooling. Hot water from showers, laundry, and other household activities hold heat that is wasted when the water is sent to the sewer. Wastewater heat recovery systems, like the Piranha HC, harness this rejected heat and turn it into ambient heating and cooling for the building.

THEORETICAL BUILDING

The analyses completed by the School of Mines team were performed using the values provided by a theoretical building. The building matches the description of an idealized multi-use structure to house 50 apartments and 25,000 square feet of retail space.